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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DSOUZA, JOSEPH FRANCIS A

ART UNIT

PAPER NUMBER

2611

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/824,932	Applicant(s) RUAT ET AL.	
	Examiner Adolf DSouza	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1- 6, 8 – 9, 10 – 15, 17, 18 - 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick et al. (US 4,907,225) in view of Applicant Admitted Prior Art (hereafter referred to as AAPA) and further in view of Sexton et al. (US 5,072,374).

Regarding claim 1, Gulick discloses an asynchronous frame receiver (Abstract; column 2, lines 59 – 68; column 3, lines 15 – 17) comprising:

an input for receiving asynchronous frames comprising standard characters, and a header comprising a break character with a data bit length greater than a data bit length of the standard characters;

a break character detection unit for detecting the break character (column 3, lines 15 – 17; Fig. 21, element 412 break checker; column 37, lines 30 - 33);

and a standard character processing unit for detecting the standard characters, said standard character processing unit being activated by said break character detection unit based upon the break character being detected (column 35, lines 10 – 52; column 38, lines 21 – 34).

Gulick does not explicitly disclose an input for receiving asynchronous frames comprising standard characters, and a header comprising a break character with a data bit length greater than a data bit length of the standard characters.

In the same field of endeavor, however, AAPA discloses an input for receiving asynchronous frames comprising standard characters, and a header comprising a break character (Applicant's Prior Art Figure 1; wherein the header is the BRK + SYNC section of the frame).

Therefore it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to use the method, as taught by AAPA, in the system of Gulick because this would allow the UART to conform to the specification of the LIN protocol, as disclosed by the AAPA (Specification, page 2, paragraph 5).

In the same field of endeavor, however, Sexton discloses a header comprising a break character with a data bit length greater than a data bit length of the standard characters (column 3, lines 27 – 31).

Therefore it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to use the method, as taught by Sexton, in the system of

Gulick because this would allow the UART to conform to the specification of the communication protocol, so that it could communicate properly with other devices.

Regarding claim 2, Gulick discloses a selection circuit for selecting a first operating mode in which said break character detection unit is deactivated, or a second operating mode in which said break character detection unit is active and controls said standard character processing unit (column 3, lines 15 – 29; column 37, lines 30 – 33; wherein since the break detection is performed in asynchronous mode, selection of asynchronous or synchronous mode is equivalent to activating or deactivating the break character detection unit).

Regarding claim 3, Gulick discloses break character detection unit detects a break character formed of bits having a same value (column 38, lines 21 – 24; wherein the same values is interpreted as the all ZEROS that are transmitted).

Regarding claim 4, Gulick discloses the asynchronous frames comprise a synchronization character, and wherein said break character detection unit detects the synchronization character (column 10, lines 30 – 37; column 19, line 42 – column 20, line 2; wherein the synchronization character is interpreted as the SFS signal and the break character detection unit detecting the synchronization character is done by when the first 8 bits of the frame are located).

Regarding claim 5, Gulick discloses a self-synchronization circuit for synchronizing a local clock signal of the receiver with a reference clock signal in the synchronization

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character (column 41, line 65 – column 42, line 13; wherein synchronizing the local clock to the reference clock is interpreted as host request signal being synchronized with the local clock signal).

Regarding claim 6, Gulick discloses said self-synchronization circuit is activated by said break character detection unit (column 10, lines 30 – 37; column 19, line 42 – column 20, line 2; column 41, line 65 – column 42, line 13; wherein the activation of the self-synchronization circuit is interpreted as being done by the HREQ signal).

Regarding claim 8 , Gulick discloses selection circuit comprises a register for storing a mode bit (column 3, line 15 - 21)

Regarding claim 9 , Gulick discloses a substrate, and wherein said break character detection unit and said standard character processing unit are on said substrate so that the receiver comprises an integrated circuit (column 2, lines 41 – 58; wherein break character detection unit and the standard character processing unit on an integrated circuit is interpreted as the controller being on a single integrate circuit).

Claim 10 – 15, 17 are similarly analyzed as claims 1 – 6, 8 respectively.

Claims 18 - 23 are directed to method/steps of the same subject matter claimed in apparatus claims 1 - 6 respectively and therefore, are rejected as explained in the rejections of claims 1 - 6 above.

4. Claim 7, 16, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick et al. (US 4,907,225) in view of Applicant Admitted Prior Art (hereafter referred to as AAPA) and further in view of Sexton et al. (US 5,072,374) and Wegner et al. (US 5,649,122).

Regarding claim 7, Gulick does not disclose the break character detection unit comprises a first state machine, and wherein said standard character processing unit comprises a second state machine.

In the same field of endeavor, however, Wegner discloses the break character detection unit comprises a first state machine, and wherein said standard character processing unit comprises a second state machine (column 9, lines 5 – 65; wherein the state machines that are used are interpreted as state machines 807 and 812).

Therefore it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to use the method, as taught by Wegner, in the system of Gulick because this would allow the diction units to be implemented as state machines in hardware or software, as is well known in the art.

Claim 16 is similarly analyzed as claim 7.

Claim 24 is directed to method/steps of the same subject matter claimed in apparatus claim 7 and therefore, is rejected as explained in the rejection of claim 7 above.

Other Prior Art Cited

5. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

The following patents are cited to further show the state of the art with respect to asynchronous operation of UARTS:

Kinch (US 4,079,188) discloses use a multi-mode digital enciphering system.

Carosso (US 4,749,989) discloses a word processing composite character processing method.

Wadsworth et al. (US 6,067,407) discloses a remote diagnosis of network device over a local area network.

Hong (US 6,091,737) discloses a remote communications server system.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolf DSouza whose telephone number is 571-272-1043. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



AD

Adolf DSouza
Examiner
Art Unit 2611


DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER